Communications Equipment I

Captain Lawrance P. Andrus
lawrance.andrus@usmc.mil
(703) 432-6363
W150001XQ

Overview

- PRC-117F Multiband Radio
  - Very High Frequency Band (VHF) (p. 14)
  - Ultra-High Frequency Band (UHF) (p. 15)
- MAGTF Communications System Equipment (PRC-117F) (p. 23-28)
- Practical Application Exercise

PRC-117F: Multiband Radio

- Radio that is capable of operating in more than one frequency band. i.e VHF, UHF.

Very High Frequency (VHF)

- Most widely used in infantry battalions
- Reliable communications up to 40km (Slightly beyond line of sight (LOS) with amplifiers
- Frequency Range: 30 – 89.999 MHz
- Single Channel Ground Air Systems (SINCGARS)

Ultra High Frequency (UHF)

- Most widely used for ***ground to air*** and ***air to air*** communications
- Strictly LOS
- Frequency Range: 225 – 512 MHz

RT-1796 (PRC-117)

Radio/Spec	RT	Freq Range	Op Mode	Pwr Out	Pl Range
PRC-117F	RT-1796	30-512 MHz	VHF, UHF LOS, DED SATCOM, DAMA	ALL OTHERS: 10W SATCOM:20W	10KM/VHF
VRC-103	RT-1796	30-512 MHz	VHF, UHF LOS, DED SATCOM, DAMA	50W	50KM

- **PRC-117F**
  - Originally fielded for UHF LOS capability
    - One of the primary radios utilized at the Bn and Company level
    - Higher power out than hand held radios makes it ideal for a longer reach back capability on foot patrols
    - ***10 Km for VHF/SINCGARS Mode***
- **VRC-103**
  - Same capability in a vehicle mounted, amplified package

001XQ 6

Review

- PRC-117F Multiband Radio
  - Very High Frequency Band (VHF) (p. 14)
  - Ultra-High Frequency Band (UHF) (p. 15)
- MAGTF Communications System Equipment (PRC-117F) (p. 23-28)
- Practical Application Exercise

Questions?

Captain Andrus
lawrance.andrus@usmc.mil

Communications Equipment I

"Obviously no army, except a one-man army can either exist or operate without communications…."

—p.38 Technology and War

I have little faith in the signal-service by flags and torches, though we always used them; because, almost invariably when they were most needed, the view was cut off by intervening trees, or by mists."

—William W.T. Sherman